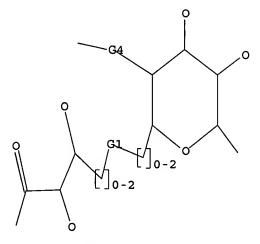
L1 L2		STRUCTURE UPLOADED 50 S L1 SSS SAM
	FILE	'STNGUIDE' ENTERED AT 18:53:15 ON 13 JUN 2007
L3 L4	FILE	'REGISTRY' ENTERED AT 18:54:28 ON 13 JUN 2007 STRUCTURE UPLOADED 6 S L3 SSS SAM
	FILE	'STNGUIDE' ENTERED AT 18:55:05 ON 13 JUN 2007
L5	FILE	'REGISTRY' ENTERED AT 19:05:50 ON 13 JUN 2007 123 S L3 SSS FULL
L6	FILE	'HCAPLUS' ENTERED AT 19:06:12 ON 13 JUN 2007 1005 S L5
	FILE	'STNGUIDE' ENTERED AT 19:06:27 ON 13 JUN 2007
L7 L8 L9	FILE	'REGISTRY' ENTERED AT 19:12:09 ON 13 JUN 2007 STRUCTURE UPLOADED 2 S L7 SSS SAM 28 S L7 SSS FULL
L10	FILE	'HCAPLUS' ENTERED AT 19:12:54 ON 13 JUN 2007 11 S L9

L7 STRUCTURE UPLOADED

=> d 17 L7 HAS NO ANSWERS L7 STR



G1 O, S, N, CH2

G2 S, P, CO2H, COOH

G3

G4 O,S,N

=> d l10 ibib abs hitstr 1-11

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L10 ANSWER 1 OF 11 HCAPLUS COPYRIGHT 2007 ACS on STN
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ACCESSION NUMBER: 2004:333730 HCAPLUS <<LOGINID::20070613>>

DOCUMENT NUMBER: 140:332537

TITLE: Glucose-based compounds with affinity to P-selectin INVENTOR(S): Appeldoorn, Chantal Catharina Maria; Biessen, Erik Anna Leonardus; Molenaar, Thomas Jacobus Maria; Van

Berkel, Theodorus Josephus Cornelis

PATENT ASSIGNEE(S): Yamanouchi Europe B.V., Neth.

SOURCE: PCT Int. Appl., 28 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PA'	PATENT NO.				KIND		DATE		APPLICATION NO.					DATE				
WO	WO 2004033473				A1		20040422							20031013				
							AU,											
		co,	CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	ES,	FI,	GB,	GD,	GE,	GH,	
							IN,											
	•	LS,	LT,	LU,	LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	MZ,	NO,	NZ,	OM,	PH,	
		PL,	PT,	RO,	RU,	SC,	SD,	SE,	SG,	SK,	SL,	TJ,	TM,	TN,	TR,	TT,	TZ,	
		UA,	UG,	US,	UZ,	VC,	VN,	YU,	ZA,	ZM,	ZW							
	RW:	GH,	GM,	ΚE,	LS,	MW,	ΜZ,	SD,	SL,	SZ,	TZ,	UG,	ZM,	ZW,	AM,	ΑZ,	BY,	
		KG,	ΚZ,	MD,	RU,	TJ,	TM,	ΑT,	BE,	ВG,	CH,	CY,	CZ,	DE,	DK,	EE,	ES,	
							ΙE,											
		BF,	ВJ,	CF,	CG,	CI,	CM,	GA,	GN,	GQ,	GW,	ML,	MR,	NE,	SN,	TD,	TG	
CA	CA 2501842				A1 20040422				CA 2003-2501842					20031013				
AU	U 2003278090				A1 20040504				AU 2003-278090					20031013				
EP	1549658				A1 20050706				EP 2003-769400					20031013				
	R:	ΑT,	BE,	CH,	DE,	DK,	ES,	FR,	GB,	GR,	IT,	LI,	LU,	NL,	SE,	MC,	PT,	
		ΙE,	SI,	LT,	LV,	FI,	RO,	MK,	CY,	AL,	TR,	BG,	CZ,	EE,	ΗU,	SK		
BR	BR 2003015231				Α		20050823			BR 2003-15231					20031013			
									JP 2004-542495									
US 2005261207				A1		2005	1124	1	US 2	005-	5306	01		2	0050	407		
PRIORITY APPLN. INFO.:										002-					0021	011		
									1	WO 2	003-1	EP11	457 _.	Ī	W 2	0031	013	

OTHER SOURCE(S): MARPAT 140:332537

AB The invention relates to certain glucose-based compds. with affinity to P-selectin to act as antagonists or partial antagonists of P-selectin. These compds. are useful as targeting ligands with an ability to target drugs and genetic material to cells and tissues expressing P-selectin. The synthesis of glucose-based compds. and their use for the preparation of pharmaceutical compns. for the treatment of P-selectin-associated disorders, the conjugates, pharmaceutical carriers and drug delivery systems comprising these compds., and a method for determining whether a compound is capable of binding to P-selectin are also described.

IT 681121-11-9P 681121-12-0P 681121-13-1P 681121-25-5P 681121-26-6P 681121-27-7P

RL: BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of glucose-based compds. with affinity to P-selectin)

RN 681121-11-9 HCAPLUS

CN D-threo-2-Pentulose, 5-O-[2-deoxy-2-[[(2,2,2-trichloroethoxy)carbonyl]amin o]- α -D-glucopyranosyl]-, 1-(dihydrogen phosphate) (9CI) (CA INDEX NAME)

RN 681121-12-0 HCAPLUS

CN D-threo-2-Pentulose, 5-0-[2-(benzoylamino)-2-deoxy-α-D-glucopyranosyl]-, 1-(dihydrogen phosphate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 681121-13-1 HCAPLUS

CN D-threo-2-Pentulose, 5-0-[2-deoxy-2-[(2-naphthalenylcarbonyl)amino]- α -D-glucopyranosyl]-, 1-(dihydrogen phosphate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 681121-25-5 HCAPLUS

CN D-threo-2-Pentulose, 5-O-[2-deoxy-2-[(1-oxooctyl)amino]-\alpha-D-

Roy P. Issac Page 2

glucopyranosyl]-, 1-(dihydrogen phosphate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Me (CH₂) 6
$$R$$
 S OH O OPO₃H₂

RN 681121-26-6 HCAPLUS

CN D-threo-2-Pentulose, 5-O-[2-deoxy-2-[(4-nitrobenzoy1)amino]- α -D-glucopyranosyl]-, 1-(dihydrogen phosphate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 681121-27-7 HCAPLUS

CN D-threo-2-Pentulose, 5-0-[2-deoxy-2-[[4-(trifluoromethyl)benzoyl]amino]- α -D-glucopyranosyl]-, 1-(dihydrogen phosphate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 681121-19-7 HCAPLUS
CN D-threo-2-Pentulose, 5-O-[3,4,6-tri-O-acetyl-2-deoxy-2-[(1-oxooctyl)amino]α-D-glucopyranosyl]-, 1-(dihydrogen phosphate) (9CI) (CA INDEX NAME)

RN 681121-20-0 HCAPLUS

CN D-threo-2-Pentulose, 5-O-[3,4,6-tri-O-acetyl-2-deoxy-2-[[(2,2,2-trichloroethoxy)carbonyl]amino]- α -D-glucopyranosyl]-, 1-(dihydrogen phosphate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 681121-21-1 HCAPLUS

CN D-threo-2-Pentulose, 5-O-[3,4,6-tri-O-acetyl-2-(benzoylamino)-2-deoxy- α -D-glucopyranosyl]-, 1-(dihydrogen phosphate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 681121-22-2 HCAPLUS

Roy P. Issac

Absolute stereochemistry.

RN 681121-23-3 HCAPLUS

CN D-threo-2-Pentulose, 5-O-[3,4,6-tri-O-acetyl-2-deoxy-2-[[4-(trifluoromethyl)benzoyl]amino]- α -D-glucopyranosyl]-, 1-(dihydrogen phosphate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 681121-24-4 HCAPLUS

CN D-threo-2-Pentulose, 5-O-[3,4,6-tri-O-acetyl-2-deoxy-2-[(2-naphthalenylcarbonyl)amino]- α -D-glucopyranosyl]-, 1-(dihydrogen phosphate) (9CI) (CA INDEX NAME)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 2 OF 11 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:89657 HCAPLUS <<LOGINID::20070613>>

DOCUMENT NUMBER: 130:209889

TITLE: Synthesis of C-oligosaccharides that mimic their

natural O-analogs immunodeterminants in binding to

monoclonal immunoglobulins

AUTHOR(S): Xin, Yan-Chao; Zhang, Yong-Min; Mallet, Jean-Maurice;

Glaudemans, Cornelis P. J.; Sinay, Pierre

CORPORATE SOURCE: Dep. Chimie, Ecole Normale Superieure, Paris, F-75231,

Fr.

SOURCE: European Journal of Organic Chemistry (1999), (2),

471-476

CODEN: EJOCFK; ISSN: 1434-193X

PUBLISHER: Wiley-VCH Verlag GmbH

DOCUMENT TYPE: Journal LANGUAGE: English

OTHER SOURCE(S): CASREACT 130:209889

AB The stereoselective synthesis of analogs of the Me β -glycosides of $(1\rightarrow6)$ - β -D-galacto-oligosaccharides (up to tetrasaccharide), in which the interglycosidic O atoms are replaced by a CH2 group, is

described.

IT 220864-61-9P 220864-66-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of galacto C-oligosaccharides)

RN 220864-61-9 HCAPLUS

CN 1-Nonyn-3-one, 7-hydroxy-4,5,6-tris(phenylmethoxy)-1-[(2R,3S,4S,5R,6R)-tetrahydro-6-methoxy-3,4,5-tris(phenylmethoxy)-2H-pyran-2-yl]-9[(2S,3S,4R,5S,6R)-tetrahydro-3,4,5-tris(phenylmethoxy)-6[(phenylmethoxy)methyl]-2H-pyran-2-yl]-, (4R,5S,6S,7R)- (9CI) (CA INDEX NAME)

RN 220864-66-4 HCAPLUS

CN 1-Nonyn-3-one, 7-hydroxy-4,5,6-tris(phenylmethoxy)-1-[(2R,3S,4S,5R,6R)-tetrahydro-6-methoxy-3,4,5-tris(phenylmethoxy)-2H-pyran-2-yl]-9[(2S,3S,4R,5S,6R)-tetrahydro-3,4,5-tris(phenylmethoxy)-6-[2[(2S,3S,4R,5S,6R)-tetrahydro-3,4,5-tris(phenylmethoxy)-6[(phenylmethoxy)methyl]-2H-pyran-2-yl]ethyl]-2H-pyran-2-yl]-,
(4R,5S,6S,7R)- (9CI) (CA INDEX NAME)

....O Ph

Ph

REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 3 OF 11 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1997:727876 HCAPLUS <<LOGINID::20070613>>

DOCUMENT NUMBER: 128:34659

TITLE: Stereoselective epoxidations of vinylogous

esters/carbonates directed by the 2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl auxiliary: a route to

near stereopure tertiary alcohols bearing functional

arms

AUTHOR(S): Bhatia, Gurpreet S.; Lowe, Richard F.; Pritchard,

Robin G.; Stoodley, Richard J.

CORPORATE SOURCE: Department Chemistry, UMIST, Manchester, M60 1QD, UK

SOURCE: Chemical Communications (Cambridge) (1997), (20),

1981-1982

CODEN: CHCOFS; ISSN: 1359-7345

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal LANGUAGE: English

OTHER SOURCE(S): CASREACT 128:34659

GI

O R1
R2
O OAC
OAC
OAC
I

AB The 2,3,4,6-tetra-O-acetyl- β -D-glucopyranosyl auxiliary is effective

in directing the epoxidn. of vinylogous esters/carbonates I [R1 = Me, Et, OEt, R2 = Me, H; R1R2 (CH2)3, OCH2CH2] with dimethyldioxirane; the derived epoxides are convertible into a versatile class of 1,2,3-trifunctional chirons.

IT 199481-29-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of tertiary alcs. via stereoselective epoxidns. of vinylogous esters/carbonates using glucopyranosyl auxiliary)

RN 199481-29-3 HCAPLUS

CN 3-Pentanone, 2-hydroxy-1-methoxy-1-[(2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl)oxy]-, (1R,2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

IT 199481-28-2P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of tertiary alcs. via stereoselective epoxidns. of vinylogous esters/carbonates using glucopyranosyl auxiliary)

RN 199481-28-2 HCAPLUS

CN 2-Butanone, 3-hydroxy-4-methoxy-4-[(2,3,4,6-tetra-O-acetyl- β -D-glucopyranosyl)oxy]-, (3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 4 OF 11 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1997:451514 HCAPLUS <<LOGINID::20070613>>

DOCUMENT NUMBER: 127:162025

TITLE: The synthesis of some epoxyalkyl β -C-glycosides as potential inhibitors of β -glucan hydrolases

as potential imitateors of p gracan nyarorase

AUTHOR(S): Best, Wayne M.; Ferro, Vito; Harle, Julia; Stick,

Robert V.; Tilbrook, D. Matthew G.

CORPORATE SOURCE: Dep Chemistry, Univ. Western Australia, Nedlands,

6907, Australia

SOURCE: Australian Journal of Chemistry (1997), 50(5), 463-472

CODEN: AJCHAS; ISSN: 0004-9425

PUBLISHER: CSIRO
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The treatment of tetra-O-benzyl-D-glucono-1,5-lactone with various alkenylmagnesium halides gave the intermediate lactols which, upon redn

(Et3SiH/BF3) and protecting group manipulation, yielded alkenyl tetra-O-acetyl-β-D-C-glucopyranosides in good yield. These

 β -D-C-glucosides were precursors of the epoxyalkyl

β-D-C-glucopyranosides, themselves putative inhibitors of

β-glucan hydrolases. Similar addns. of Grignard reagents to

per-benzylated cellobionolactone were not as successful in yielding epoxyalkyl $\beta\text{-C-cellobiosides}.$ The addition of Grignard reagents to

1,2-anhydro-3,4,6-tri-O-benzyl- α -D-glucose offers a viable

alternative route to the prop-2-enyl $\beta\text{-D-C-glucoside},$ but not to the

but-3-enyl and pent-4-enyl counterparts. Likewise, the addition of Grignard reagents to a 1,2-anhydro cellobiose gave disappointing results. Preliminary results are reported for a novel approach to alkenyl

 β -D-C-glucosides by the alkylation of nitromethyl

β-D-C-glucosides.

IT 193546-78-0P 193546-80-4P 193546-81-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(synthesis of epoxyalkyl β -C-glycosides as potential inhibitors of β -glucan hydrolases)

RN 193546-78-0 HCAPLUS

CN D-gluco-Non-1-en-4-ulose, 1,2,3-trideoxy-5,6,9-tris-O-(phenylmethyl)-7-O[2,3,4,6-tetrakis-O-(phenylmethyl)-β-D-glucopyranosyl]- (9CI) (CA

INDEX NAME)

Absolute stereochemistry.

RN 193546-80-4 HCAPLUS

CN D-gluco-Dec-1-en-5-ulose, 1,2,3,4-tetradeoxy-6,7,10-tris-O-(phenylmethyl)8-O-[2,3,4,6-tetrakis-O-(phenylmethyl)-β-D-glucopyranosyl]- (9CI)
(CA INDEX NAME)

Absolute stereochemistry.

Roy P. Issac Page 11

RN 193546-81-5 HCAPLUS

CN 1-Undecen-6-one, 10-hydroxy-7,8,11-tris(phenylmethoxy)-9-[[2,3,4,6-tetrakis-0-(phenylmethyl)-β-D-glucopyranosyl]oxy]-, (7R,8S,9R,10R)(9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

REFERENCE COUNT: 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 5 OF 11 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1991:492739 HCAPLUS <<LOGINID::20070613>>

DOCUMENT NUMBER: 115:92739

TITLE: Assignment of anomeric configurations of pyranose

sugars in oligosaccharides using a sensitive FAB-MS

strategy

AUTHOR(S): Khoo, Kay Hooi; Dell, Anne

CORPORATE SOURCE: Dep. Biochem., Imp. Coll. Sci. Technol. Med., London,

SW7 2AZ, UK

SOURCE: Glycobiology (1990), 1(1), 83-91

CODEN: GLYCE3; ISSN: 0959-6658

DOCUMENT TYPE: Journal LANGUAGE: English

AB Anomeric configurations of pyranose sugars in oligosaccharides is determined by fast-atom-bombardment mass spectrometry (FAB-MS). The method, which is applicable to mixts. of reduced or unreduced oligosaccharides, is based upon FAB-MS analyses of deuteroacetylated derivs. before and after oxidation

with CrO3. The products of chromium trioxide oxidation can be successfully analyzed at the microgram level using FAB-MS. The mol. and fragment ions produced in the FAB experiment define the number of sites oxidized and their location in the sequence. For samples which fragment poorly we describe a mild methanolysis procedure, compatible with FAB-MS, which preferentially cleaves the esters formed during the oxidation Incorporation of an acetolysis step prior to oxidation permits analyses of polysaccharides. This oxidation/FAB-MS strategy should prove valuable in structural analyses of a wide range of biol. important carbohydrates which cannot be isolated in sufficient quantities to permit NMR studies.

IT 135296-87-6P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation and mass spectra of)

RN 135296-87-6 HCAPLUS

CN D-xylo-5-Hexulosonic acid, $O-2,3,4-tri-O-(acetyl-d3)-6-deoxy-D-galactopyranosyl-(1<math>\rightarrow$ 2)-O-3,4,6-tri-O-(acetyl-d3)-L-arabino-5-hexulosonoyl-(1 \rightarrow 4)-, 2,3,6-tri(acetate-d3) (9CL) (CA INDEX NAME)

IT 135281-19-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation, methanolysis, and mass spectra of)

RN 135281-19-5 HCAPLUS

CN L-arabino-5-Hexulosonic acid, 2-O-[2,3,4-tri-O-(acetyl-d3)-6-deoxy-D-galactopyranosyl]-, tri(acetate-d3), ester with D-glucopyranose 1,2,3,6-tetra(acetate-d3) (9CI) (CA INDEX NAME)

L10 ANSWER 6 OF 11 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1991:24402 HCAPLUS <<LOGINID::20070613>>

DOCUMENT NUMBER: 114:24402

TITLE: Synthesis and reactions of leucrose and its exocyclic

glycal

AUTHOR(S): Thiem, Joachim; Kleeberg, Matthias

CORPORATE SOURCE: Org. Chem. Inst., Westfael. Wilhelms-Univ., Muenster,

D-4400, Germany

SOURCE: Carbohydrate Research (1990), 205, 333-45

CODEN: CRBRAT; ISSN: 0008-6215

DOCUMENT TYPE: Journal LANGUAGE: English

OTHER SOURCE(S): CASREACT 114:24402

GI

The conversion of leucrose (I; R = R1 = H, R2 = OH, R3 = CH2OH) into the corresponding I [R = Ac, R1 = CH2SO2Me, R2R3 = CH2 (II); R = R1 = Bz, R2R3 = CH2 (III)], is described. Hydrogenation of III gave the corresponding anhydroalditol derivs. N-Iodosuccinimide-mediated glycosylation of III gave 1,2,3,4-tetra-O-acetyl-6-O-[3,4-di-O-benzoyl-1-deoxy-1-iodo-5-O-(2,3,4,6-tetra-O-benzoyl- α -D-glucopyranosyl)- β -D-fructopyranosyl]- β -D-glucopyranose. Some amino, acetylated, and isopropylidene derivs. of leucrose have been prepared and characterized.

10/530,60113/06/2007

IT 131157-87-4P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of)

RN 131157-87-4 HCAPLUS

CN D-Fructose, 5-0-(2,3,4,6-tetra-O-acetyl- α -D-glucopyranosyl)-,

1,3,4,6-tetraacetate (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L10 ANSWER 7 OF 11 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

DOCUMENT NUMBER: 111:170752

TITLE: Prokaryotic triterpenoids. A novel hopanoid from the

ethanol-producing bacterium Zymomonas mobilis

AUTHOR (S): Flesch, Gerard; Rohmer, Michel

CORPORATE SOURCE: Ec. Natl. Super. Chim. Mulhouse, Mulhouse, 68093, Fr.

SOURCE: Biochemical Journal (1989), 262(2), 673-5

CODEN: BIJOAK; ISSN: 0306-3275

DOCUMENT TYPE: Journal

LANGUAGE: English

GI

Among the triterpenoids of Z. mobilis, a novel hopanoid (I), AB 32-oxabacteriohopane-33,34,35-triol β-linked via its primary hydroxy

group to glucosamine, was isolated as a minor compound

IT 123167-02-2P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

RN 123167-02-2 HCAPLUS

CN 4-Octanone, 2,3-bis (acetyloxy) -7-[(21 α) -A'-neo-22,29,30-

trinorgammaceran-21-yl]-1-[[3,4,6-tri-O-acetyl-2-(acetylamino)-2-deoxy- β -D-glucopyranosyl]oxy]-, [2S-(2R*,3R*,7S*)]- (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 1-B

L10 ANSWER 8 OF 11 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1982:611416 HCAPLUS <<LOGINID::20070613>>

DOCUMENT NUMBER: 97:211416

TITLE: Factors determining steric course of enzymic

glycosylation reactions: glycosyl transfer products formed from 2,6-anhydro-1-deoxy-D-gluco-hept-1-enitol

by α -glucosidases and an inverting

 $exo-\alpha$ -glucanase

AUTHOR(S): Schlesselmann, Peter; Fritz, Hans; Lehmann, Jochen;

Uchiyama, Takao; Brewer, Curtis F.; Hehre, Edward J. Chem. Lab., Albert Ludwigs Univ., Freiburg/Br., Fed.

CORPORATE SOURCE: Chem. Lab Rep. Ger.

SOURCE: Biochemistry (1982), 21(25), 6606-14

CODEN: BICHAW; ISSN: 0006-2960

DOCUMENT TYPE: Journal LANGUAGE: English

AB Glycosyl transfer products were formed from 2,6-anhydro-1-deoxy-D-gluco-hept-1-enitol (heptenitol) by purified α -glucosidases from Candida tropicalis and rice and by an inverting $\exp(\alpha)$ -glucanase (glucodextranase) from Arthrobacter globiformis. The products were structurally defined through 1H and 13C NMR spectra of their crystalline per-O-acetates in comparison with those of authentic Me 1-deoxy- α -and Me 1-deoxy- β -D-gluco-heptuloside. 1-Deoxy- α -D-gluco-heptulosyl-(2 \rightarrow 7)-heptenitol and 1-deoxy- α -D-gluco-heptulosyl-(2 \rightarrow 7)-D-gluco-heptulose were produced by both the Candida α -glucosidase and the glucodextranase; 1-deoxy- α -D-gluco-

heptulosyl- $(2\rightarrow 5)$ - and 1-deoxy- α -D-gluco-heptulosyl- $(2\rightarrow7)$ -D-gluco-heptuloses by the rice α -glucosidase. These results, together with earlier findings of stereospecific hydration of heptenitol catalyzed by the same enzymes show the inadequacy of the long-accepted notion that carbohydrase-catalyzed reactions always lead to retention (or always lead to inversion) of substrate configuration. In particular, the finding that glucodextranase forms transfer products of α -configuration and a hydration product of β configuration from the same substrate provides a clear example of the functioning of acceptors rather than donor substrates in selecting the steric course of reactions catalyzed by a glycosylase. The circumstances under which acceptor cosubstrates might be expected to show this significant effect are discussed. The opportunity presumably would exist whenever carbonium ion-mediated reactions are catalyzed by glycosylases that provide oppositely oriented approaches of different acceptors to the catalytic center.

IT 83615-54-7P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

RN 83615-54-7 HCAPLUS

CN D-gluco-2-Heptulose, 1-deoxy-5-O-(3,4,5,7-tetra-O-acetyl-1-deoxy- α -D-gluco-2-heptulopyranosyl)-, tetraacetate (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L10 ANSWER 9 OF 11 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1976:478279 HCAPLUS <<LOGINID::20070613>>

DOCUMENT NUMBER: 85:78279

TITLE: The mass spectra of permethylated oligosaccharides

AUTHOR(S): Moor, J.; Waight, E. S.

CORPORATE SOURCE: Org. Chem. Lab., Imp. Coll. Sci. Technol., London, UK

SOURCE: Biomedical Mass Spectrometry (1975), 2(1), 36-45

CODEN: BMSYAL; ISSN: 0306-042X

DOCUMENT TYPE: Journal LANGUAGE: English

AB The electron impact mass spectra of the permethyl ethers of 25 oligosaccharides are reported. The spectra gave considerable structural information, especially for the detection of fructose units, determination of pyranose/furanose ratio and position of the glycosidic link. Spectra of permethyl ether derivs. were more information than the spectra of the corresponding Me3Si ethers.

IT 55652-45-4 60618-00-0

RL: PRP (Properties)
 (mass spectrum of)

RN 55652-45-4 HCAPLUS

CN D-Fructose, 1,3,4,5-tetra-O-methyl-6-O-(2,3,4,6-tetra-O-methyl- α -D-

glucopyranosyl) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 60618-00-0 HCAPLUS

CN D-Fructose, 1,3,4,6-tetra-O-methyl-5-O-(2,3,4,6-tetra-O-methyl- α -D-glucopyranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L10 ANSWER 10 OF 11 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1975:112208 HCAPLUS <<LOGINID::20070613>>

DOCUMENT NUMBER: 82:112208

TITLE: Field desorption mass spectra of oligosaccharides and

their permethylates and peracetylates

AUTHOR(S): Moor, Jacob; Waight, E. S.

CORPORATE SOURCE: Org. Chem. Lab., Imp. Coll. Sci. Technol., London, UK

SOURCE: Organic Mass Spectrometry (1974), 9(9), 903-12

CODEN: ORMSBG; ISSN: 0030-493X

DOCUMENT TYPE: Journal LANGUAGE: English

AB The field desorption mass spectra of di-, tri-, and tetrasaccharides showed strong [M + 1]+ peaks, formed by proton transfer between neighboring adsorbed sugar mols. or from residual H2O, thus allowing mol. weight determination The variation in intensities of fragment ions with emitter current were studied. Permethylated oligosaccharides gave intense mol. ions but the most intense peak was due to the loss of MeOCH2. The mol. ions of peracetylated oligosaccharides were weak, loss of AcOH being an important process. For all the compds. studied, interglycosidio cleavage produced intense peaks corresponding to monosaccharidyl cations. Electron-impact and field desorption techniques are complementary.

IT 55652-45-4

RL: PRP (Properties)

(field desorption mass spectrum of)

RN 55652-45-4 HCAPLUS

CN D-Fructose, 1,3,4,5-tetra-O-methyl-6-O-(2,3,4,6-tetra-O-methyl- α -D-qlucopyranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L10 ANSWER 11 OF 11 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1958:71618 HCAPLUS <<LOGINID::20070613>>

DOCUMENT NUMBER: 52:71618
ORIGINAL REFERENCE NO.: 52:12682b-c

TITLE: Infrared identification of disaccharides

AUTHOR(S): White, Jonathan W., Jr.; Eddy, C. R.; Petty, Jeanne;

Hoban, Nancy

CORPORATE SOURCE: Eastern Regional Research Lab., Philadelphia, PA

SOURCE: Anal. Chem. (1958), 30, 506-13

CODEN: ANCHAM; ISSN: 0003-2700

DOCUMENT TYPE: Journal LANGUAGE: Unavailable

AB The value of infrared spectra for the identification of amorphous disaccharides and their acetates, by comparison with spectra of known disaccharides and their acetates, is demonstrated. Infrared spectra of 10 amorphous disaccharides, of D-glucose, of D-glucose and D-fructose, and of their β -octaacetates are presented over the range 650-1500 cm.-1 KBr disks were used. All spectra differ in sufficient detail to allow

differentiation among closely related disaccharides.

IT 131157-87-4, Leucrose, octaacetate

(spectra of)

RN 131157-87-4 HCAPLUS

CN D-Fructose, 5-O-(2,3,4,6-tetra-O-acetyl-α-D-glucopyranosyl)-,
1,3,4,6-tetraacetate (9CI) (CA INDEX NAME)

10/530,60113/06/2007

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Roy P. Issac